

Appl. No. 09/754,264
Amendment/Response in reply
to Office Action of July 26, 2004.

Page 5 of 8

is deposited at a temperature of at least 400°C.

REMARKS/DISCUSSION OF ISSUES

Pending Claims

Upon entry of the present amendment, claims 10, 11, 13-15 and 17-20 are pending. Claims 1-9, which were the subject of a restriction requirement, are cancelled without prejudice or disclaimer of their subject matter.

Rejection Under 35 USC § 103(a)

The Office Action rejects claims 10-15, 17, 18 and 20 under 35 USC § 103(a) as being unpatentable over *Wang, et al.* (U.S. Patent 5,604,155) in view of *Soichi* (JP 09249966A). For at least the reasons set forth below, claims 10-13 are allowable over the applied art.

The establishment of a *prima facie* case of obviousness required that *all* of the elements of a claim be found in the prior art. It follows that if a single element of a claim is missing from the prior art, a *prima facie* case of obviousness cannot be properly established. Moreover, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is a teaching, suggestion or motivation to do so found in the references relied upon.

Applicants' attorney has reviewed the portion of the Office Action that relates to the translation of the reference to *Soichi*. Applicant's attorney reiterates his previous position and again asserts this rejection is wholly improper for at least the following reasons. Again, as provided in MPEP § 706.02:

"Prior art uncovered in searching the claimed subject matter of a patent application often includes English language abstracts of underlying documents, such as technical literature or foreign patent documents which may not be in the English language. When an abstract is used to support a

Appl. No. 09/754,264
Amendment/Response in reply
to Office Action of July 26, 2004.

Page 6 of 8

rejection, the evidence relied upon is the facts contained in the abstract, not additional facts that may be contained in the underlying full text document. Citation of and reliance upon an abstract without citation of and reliance upon the underlying scientific document is generally inappropriate where both the abstract and the underlying document are prior art. See *Ex parte Jones*, 62 USPQ2d 1208, 1208 (Bd. Pat. App. & Inter. 2001) (unpublished). To determine whether both the abstract and the underlying document are prior art, a copy of the underlying document must be obtained and analyzed. If the document is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the examiner is relying upon in support of the rejection."

The undersigned attorney has reviewed this paragraph carefully, and respectfully submits that the native language of the Applicants is not germane to issue of whether an English-language copy of the reference to Soichi need be presented. Moreover, the reliance by the Examiner on *Soichi* in the Office Action of August 7, 2003 and the subsequent response to this Office Action does not preclude Applicants' attorney from raising this objection.

For at least the reasons set forth above, the rejection of claim 10 in view of *Soichi* and the claims that depend therefrom is improper.

The objection to the reliance on *Soichi* notwithstanding, Applicants respectfully submit that the reference to Wang lacks at least the disclosure of at least one of the features of claim 10. To this end, claim 10 features:

"...sputter depositing an Al₃Ti layer on said Ti layer using said Al₃Ti target; and, after the sputter depositing, annealing said substrate at a temperature of at least 400°C to promote absorption of Si into said Al₃Ti layer.

Contrastingly, the reference specifically lacks the disclosure of sputter depositing an Al₃Ti layer on said Ti layer and the sputter depositing, annealing the substrate. Rather, the reference discloses sputtering an Al/Si/Cu layer 62 at a temperature of 450°C. Thus, it is respectfully submitted that the reference to *Wang* discloses the simultaneous heating and depositing of an Al/Si/Cu layer; and not the sputter depositing of an Al₃Ti layer followed by annealing the substrate at a

Appl. No. 09/754,264
Amendment/Response in reply
to Office Action of July 26, 2004.

Page 7 of 8

temperature of at least 400°C. (Kindly refer to column 4, lines 21-33 for support for the above assertions.)

For at least the reasons set forth above, it is respectfully submitted that the reference to *Wang* lacks the disclosure of at least one of the features of claim 10. Therefore, the reference to *Wang* cannot support a prima facie case of obviousness. It is respectfully submitted that the rejection of claim 10 proffered in the Office Action is improper and should be withdrawn. Moreover, for at least the reasons set forth above, the claims that depend from claim 10 are also improperly rejected.

Claim 14 features "...pattern etching an Al layer, which forms beneath said Al-Si-Cu layer; and

after the depositing of the Al-Si-Cu layer, annealing the substrate at a temperature of at least 400 °C.

The reference to *Wang* specifically relied upon, does not disclose at least this feature. To this end, the reference to *Wang* discloses an anneal step **before the depositing** of an aluminum-based layer. Moreover, and as discussed in connection with claim 10 above, the reference to *Wang* discloses that the Al/Si/Cu layer is deposited by sputtering at a temperature of 450°C. Thus, it is respectfully submitted that the reference to *Wang* discloses **simultaneously sputtering an Al/Si/Cu layer 62 and heating at 450°C.** (Kindly refer to column 2, line 36, and column 4, lines 21-33 for support for the above assertions.) As such, the reference to *Wang* does not disclose annealing the substrate at a temperature of at least 400 °C after depositing the Al-Si-Cu layer. Therefore, the reference to *Wang* lacks at least one of the features of claims 14. Accordingly, claim 14 and the claims that depend therefrom are patentable over the applied art. Allowance is earnestly solicited.

Claim 17, as amended, features: "...pattern etching said Al layer; and *after the depositing of the Al layer, annealing the substrate at a temperature of at least 400 °C.*"

For reasons substantially the same as those described in connection with the remarks related to claim 14, it is respectfully submitted that the reference to *Wang*, et

Appl. No. 09/754,264
Amendment/Response in reply
to Office Action of July 26, 2004.

Page 8 of 8

a/. lacks at least the anneal sequence set forth in claim 17. As such, claim 17 and the claims that depend therefrom are patentable over the applied art. Allowance is earnestly solicited.


Conclusion

In view of the foregoing, applicant(s) respectfully request(s) that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application to be in condition for allowance.

If any points remain in issue, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below, so that late fees may be avoided.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies to charge payment or credit any overpayment to Deposit Account Number 50-0238 for any additional fees under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17.

Respectfully submitted on behalf of
Oki Electric Industry Co., Ltd.


by: William S. Francos (Reg. No. 38,456)
Volentine, Francos & Whitt, PLLC
One Freedom Square
11950 Freedom Dr.
Reston, VA 20190
(610) 375-3513

Date: November 1 2004